



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/928,579	08/13/2001	Zoran Petrovic	372155	7878

30955 7590 03/08/2006

LATHROP & GAGE LC
4845 PEARL EAST CIRCLE
SUITE 300
BOULDER, CO 80301

EXAMINER

NILAND, PATRICK DENNIS

ART UNIT	PAPER NUMBER
----------	--------------

1714

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/928,579

Applicant(s)

PETROVIC ET AL.

Examiner

Patrick D. Niland

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/23/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-92 is/are pending in the application.
- 4a) Of the above claim(s) 84-92 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-83 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1714

1. Claims 1-27, 29-38, and 51-83 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The instant claims 1-27, 29-38, and 51-83 recite “effective for increasing” various claimed properties. It is unclear what they are to be increased over, e.g. a corresponding linear polyurethane, an unfilled polyurethane, etc. It is noted that the components of the patentee encompass polyfunctional polyols and polyisocyanates (column 9, lines 34-57, column 10, lines 51-64 with “crosslinking” of line 63 being particularly noted). Thus, the polyols and polyisocyanates with more than 2 functional groups give crosslinking and are therefore “crosslinkers”. It is noted that these polyfunctional compounds are part of a mixture of compounds and therefore a portion can be thought of as polyol or polyNCO per se and the remainder as “crosslinker” per se.

2. Claims 1-27, 29-38, and 51-83 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

A. The instant claims now recite “and an effective amount of crosslinker for increasing compressive strength, flexural modulus, tensile strength, and hardness of the composition”. The instant specification does not describe in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The instant specification does not disclose this new

Art Unit: 1714

limitation and it is therefore new matter. The applicant's own arguments recite only glycerine with some of the newly claimed properties. Glycerine and the argued properties are not commensurate in scope with the new claim limitations. The applicant does not give guidance in how to choose the instantly claimed "effective amount" regarding all of the crosslinkers encompassed by the instant claims. There are an infinite number of these with infinite considerations in what properties they will give or detract from. The determination of all encompassed crosslinkers and effective amounts thereof requires undue experimentation therefore as the required teaching to achieve the claimed effective amount is not adequately described in the instant specification for all encompassed crosslinkers. Furthermore, the applicant's arguments also attribute the properties to the presence of pea gravel, not only the crosslinker.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Art Unit: 1714

4. Claims 1-83 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6686435. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claims encompass the instantly claimed invention by their use of the broad term filler which encompasses the aggregate of the instant claims. Furthermore, silica is used in the instant claims as the aggregate and is specifically claimed by the patentee (claim 3). The use of antifoam shows that the patentee removes entrained air from the mixture. It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use vacuum to aid in the removal of bubble because it is well known to also use vacuum to remove entrained air and they are known to weaken the final product. The reaction of the patented claims falls within the scope of "cured" of the instant claims. The silica must be bonded to the polyurethane of the patentee since the reaction mixture of the patentee is that of the instant claims. The compositions of the prior art contain the same ingredients as those of the instant claims and therefore must also be "concrete" within the meaning of the term as it is used in the instant claims. There is no recited meaning of concrete such that this term distinguishes the patented composition from that of the instant claims. The patentee's claim clearly states "at least about a 2:1 weight ratio" of silica to the polyol which encompasses the instantly claimed amount of "aggregate composition". The portion of the patented specification argued is noted but the claim of the patentee is also part of the specification and the claimed range is all that the ordinary skilled artisan would need to enable using the instantly claimed amounts of aggregate.

For the reasons stated above, the instantly claimed invention is obvious over the patented claims and there is no showing that is commensurate in scope with the cited prior art and the

Art Unit: 1714

instant claims of unexpected results. There is no probative evidence that the instant claims could not have been filed at the time the patented claims were filed. Silica is a species of the genus aggregate of the instant claims and as such anticipates the instantly claimed aggregate. The polyurethane of the patented claims and the instant claims fall within the scope of each other. The patented claims require "at least about a 2:1 weight ratio" of silica to polyol of which the polyurethane is approximately the same amount as the polyol it is made with. 30 wt % polyurethane and 70 weight percent aggregate is 2.3:1 aggregate to polyurethane which is "at least about a 2:1 weight ratio" due to the recitation of "about" in the patented claims. The instant claims are thus obvious over those of the patent because the instantly claimed language falls within the scope of that of the patentee. There is not a showing of unexpected results for any range within a range of the instant fact situation. The filled polyurethane claims of the patentee are not limited to electrical components and encompass all other compounds as they recite "comprising" and "filler" (patented claim 3). It is not seen that pea gravel nor any other filler of the instant claims are excluded from insulators as polymer filled with such a filler would necessarily be insulating and hard as is required of many such insulators, e.g. the ceramic insulators of high tension connections. "Concrete" of the instant claims is not seen as giving any further meaning to the instant claims than the recited ingredients which follow after "comprising". Molding such "concrete" into electroinsulators is not excluded by "concrete". Arguments over the limited examples of the patentee are not persuasive as the patent is not required to be a blue print of the invention and is not even required to have examples. There is no evidence that "concrete" is different in kind than the electrical insulators of the patentee. Furthermore, the composition claims are not limited to insulators and are no different than the

Art Unit: 1714

instant claims in that the patented claims encompass the instant claims and as such are not non-analogous art as both relate to mixtures of polyurethane and aggregate. The proper comparison is not with traditional cement and limestone but with the compositions of the patentee.

The instant claims 39-50 do not require the instantly claimed crosslinker as 0 is encompassed by claim 39. The applicant's arguments therefore do not apply to these claims. The instant claims 1-27, 29-38, and 51-83 recite "effective for increasing" various claimed properties. It is unclear what they are to be increased over, e.g. a corresponding linear polyurethane, an unfilled polyurethane, etc. It is noted that the components of the patentee encompass polyfunctional polyols and polyisocyanates (column 9, lines 34-57, column 10, lines 51-64 with "crosslinking" of line 63 being particularly noted). Thus, the polyols and polyisocyanates with more than 2 functional groups give crosslinking and are therefore "crosslinkers". It is noted that these polyfunctional compounds are part of a mixture of compounds and therefore a portion can be thought of as polyol or polyNCO per se and the remainder as "crosslinker" per se. The crosslinking achieved by the patentee using either polyol and/or polyNCO of functionality greater than 2 will increase the molecular weight of the polymer via crosslinking by definition, make a three dimensional network of molecules by definition and a function of the reactants used, the presence of filler and the accompanying increase in molecular weight will necessarily and inherently give an increase in the claimed properties over the corresponding linear and unfilled polyurethanes of the patentee. Note the polymer textbook, i.e. well known, relationship of molecular weight to modulus. The increase in modulus is expected to give increased physical properties such as those claimed. Addition of

Art Unit: 1714

hard filler is expected to increase the overall hardness of the compositions, e.g. one of the well known purposes of “filler”.

The compositions of the instant claims are obvious over those of the patented claims for the reasons stated above and this rejection is maintained.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1714

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick D. Niland
Primary Examiner
Art Unit 1714